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EXAMINER	
LAZARO, DAVID R	
ART UNIT	**PAPER NUMBER**
2155	

DATE MAILED: 10/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/742,683	ONG, LYNDON Y.	
	Examiner	Art Unit	
	David Lazaro	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 August 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to the RCE filed 08/15/05.

2. Claims 1, 2, 4, 5-8, 10, 12, 14, 17-20 and 22 were amended.

3. Claims 1-22 are pending in this office action.

Response to Amendment/Arguments

4. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 6, 14 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 1 recites the limitation "each of the network application servers including a different pool of addresses associated with different types of data streams stored in an address mapping table, wherein the different types include at least one of voice, data and multimedia streams". The claim language does not distinctly claim how these types are different as each of voice streams, data streams and multimedia streams can all be considered data streams. Further, a multimedia stream can include voice data. As such, the claimed subject matter is not distinctly claimed and is therefore indefinite. Claims 6, 14 and 17 contain similar claim language.

8. Claim 1 recites the limitation "configured to generate at least one address mapping responsive thereto". Because of the claim language presented in through the amendment, It is not distinctly clear as to what the generation is responsive thereto. The examiner suggests the correction indicate exactly what the generation is in response to. Claim 17 contains similar claim language.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1-20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,535,511 by Rao (Rao) in view of U.S. Patent 6,801,949 by Bruck et al. (Bruck).

11. With respect to Claims 1 and 17, Rao teaches a private a private communications network comprising:

an end system configured to communicate with a remote system via a network separate from the private communications network (Col. 3, lines 39-45, separate network is a public network);

a distributed address translation mechanism (Col. 4, lines 25-30, router 16 may be distributed; Col. 4, lines 35-39, translation engine) comprising:

a network application server to receive a call request indicating the remote system wishes to communicate with the end system (Col. 3, lines 20-30) and using an address mapping table configured to communicate with the network application server to generate at least one address mapping responsive thereto (Col. 4, lines 35-48, combination of address database and translation table is address mapping table); and

a packet modifier device, separate from the network application server (Col. 4, lines 25-30, "computer software and data may be otherwise combined and/or divided for processing in or remotely from the router 16 and otherwise stored in a system or other suitable memory in or remotely from the router 16 without departing from the scope of the present invention") configured to receive a call request from the remote system via the separate network, to receive the address mapping from the network application server and to use the at least one address mapping to map communication packets from the end system for transmission on the private network in accordance with the address mapping information (Fig. 3, application table 68, application database 64,. Col. 5, lines 1-10', Col. 4, lines 14-17., Col. 4, lines 35-59, translation engine is packet modifier).

Rao does not explicitly disclose a plurality of network application servers configured to receive a call request from the end system, each of the network application servers including a different pool of addresses associated with different types of data streams stored in an address mapping table, wherein the different types include at least one of voice, data and multimedia streams and the network application servers are configured to generate at least one address mapping responsive thereto. Bruck teaches a plurality of network applications servers configured to receive requests from the end system (Col. 7 lines 11-37 and Col. 8 lines 1-33), each of the network applications servers including a

different pool of addresses associated with different types of data streams stored in an address mapping table (Col. 8 lines 1-33 and Col. 18 line 63 - Col. 19 line 23), wherein the different types include at least one of voice, data and multimedia streams (Col. 1 lines 20-43). They are further configured to generate at least one address mapping in response to incoming and outgoing data traffic (Col. 28 line 66 - Col. 29 line 47). This allows for a reliable and scalable network connection (Col. 2 line 66 - Col. 3 line 10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the system disclosed by Rao and modify it as indicated by Bruck such that the system further comprises a plurality of network application servers configured to receive a call request from the end system, each of the network application servers including a different pool of addresses associated with different types of data streams stored in an address mapping table, wherein the different types include at least one of voice, data and multimedia streams and the network application servers are configured to generate at least one address mapping responsive thereto; the packet modifier device also configured to receive the at least one address mapping from the plurality of network application servers. One would be motivated to have this, as it is desirable to provide a reliable and scalable network connection (In Bruck: Col. 2 lines 31-35 and Col. 2 line 66 - Col. 3 line 10).

12. With respect to Claim 2, Rao in view of Bruck teaches all the limitations of Claim 1, wherein: the end system is configured to communicate with the remote system by sending communication packets to the packet modifier (In Rao Col. 3, lines 39- 45), and

the packet modifier is configured to map, communication packets from the end system by substituting at least one of source and destination addresses in the packet

according to the mapping from one of the plurality of network application servers (In Rao Col. 4, lines 35-59).

13. With respect to Claim 3, Rao in view of Bruck teaches all the limitations of Claim 2, wherein the packet modifier is configured to substitute at least a source address in the packet (In Rao Col. 3, lines 26-28).

14. With respect to Claim 4, Rao teaches the network of claim 1, wherein each network application server is configured to provide the at lemst one address mapping to the packet modifed a 1 command according to a predetermined protocol (Col. 3, lines 39-48).

15. With respect to Claim 5, Rao teaches a distributed address mapping system for providing address mappings to a packet modifier device, the system comprising:

an address mapping table, configured to store information on address mappings of at least one of an end system communicable with the address mapping system over a private network (Col. 4, lines 35-48, combination of address database and translation table is address mapping table), and a remote system communicable with the end system over a separate network (Col. 3, lines 39-45, separate network is a public network); and

a network application server (Col. 3, lines 20-30), configured to communicate with the address mapping table to access the address mapping table to obtain the address mapping information and to use the address mapping information to generate a mapping association (Col. 4, lines 35-48, combination of address database and translation table is address mapping table); and

wherein the packet modifier device is separate from the network application server and the address mapping table (Col. 4, lines 25-30, "computer software and data may be otherwise combined and/or divided for processing in or remotely from the router 16 and

otherwise stored in a system or other suitable memory in or remotely from the router 16 without departing from the scope of the present invention") and is provided for receiving the address mapping information and modifying packets from at least one of the end system and the remote system in accordance with the address mapping information (Fig. 3, application table 68, application database 64,. Col. 5, lines 1-10', Col. 4, lines 14-17., Col. 4, lines 35-59, translation engine is packet modifier).

Rao does not explicitly disclose a plurality of address mapping tables, each storing a different pool of addresses, the pools of addresses associated including at least one of voice, data and multimedia pools. Bruck teaches a plurality of network applications servers configured to receive requests from the end system (Col. 7 lines 11-37 and Col. 8 lines 1-33), each of the network applications servers including a different pool of addresses associated with different types of data streams stored in an address mapping table (Col. 8 lines 1-33 and Col. 18 line 63 - Col. 19 line 23), wherein the different types include at least one of voice, data and multimedia streams (Col. 1 lines 20-43). They are further configured to generate at least one address mapping in response to incoming and outgoing data traffic (Col. 28 line 66 - Col. 29 line 47). This allows for a reliable and scalable network connection (Col. 2 line 66 - Col. 3 line 10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the system disclosed by Rao and modify it as indicated by Bruck such that the system further comprises a plurality of address mapping tables, each storing a different pool of addresses, the pools of addresses associated including at least one of voice, data and multimedia pools; and a network application server, configured to communicate with the plurality of address mapping tables to access one of the address

mapping tables to obtain the address mapping information and to use the address mapping information to generate a mapping association. One would be motivated to have this, as it is desirable to provide a reliable and scalable network connection (In Bruck: Col. 2 lines 31-35 and Col. 2 line 66 - Col. 3 line 10).

16. With respect to Claim 6, Rao in view of Bruck teaches all the limitations of Claim 5, wherein the each address mapping table is configured to store information on an address mapping of at least the end system (In Rao Col. 4, lines 56-59), and wherein the different pools of addresses include data stream address pools and voice stream address pools (In Bruck Col. 8 lines 1-33 and Col. 18 line 63 - Col. 19 line 23).

17. With respect to Claim 7, Rao in view of Bruck teaches all the limitations of Claim 5, wherein the network application server is configured to access the plurality of address mapping tables responsive to a request by the end system to communicate with the remote system (In Rao Col. 4, lines 35-59).

18. With respect to Claim 8, Rao teaches the system of claim 5, wherein the network application server is configured to access the plurality of address mapping tables responsive to a request by the remote system to communicate with the end system (In Rao Col. 4, lines 35-4).

19. With respect to Claim 9, Rao in view of Bruck teaches all the limitations of Claim 5, wherein the network application server is configured to send a command to the packet modifier to push the mapping association to the packet modifier (In Rao Col. 4, lines 35-48).

20. With respect to Claim 10, Rao teaches requesting establishment of a communication session between an end system connected to the network and a remote system connected to a separate network (Col. 3, lines 39-45, separate network is a public network);

using a distributed address translation mechanism to identify an address mapping for accessing the remote system (Col. 4, lines 25-30, router 16 may be distributed; Col. 4, lines 35-39, translation engine), the distributed address translation mechanism including a network application server and a separate packet modifier device (Col. 4, lines 25-30, "computer software and data may be otherwise combined and/or divided for processing in or remotely from the router 16 and otherwise stored in a system or other suitable memory in or remotely from the router 16 without departing from the scope of the present invention"), wherein the network application server performs the steps of accessing an address mapping table connected to the network application server (Col. 4, lines 35-48, combination of address database and translation table is address mapping table); and

determining an address mapping of at least one of the end system and the remote system based on the address mapping data for forwarding to the separate packet modifier device (Col. 4, lines 35-48, combination of address database and translation table is address mapping table, Fig. 3, application table 68, application database 64,. Col. 5, lines 1-10', Col. 4, lines 14-17., Col. 4, lines 35-59, translation engine is packet modifier); and

modifying, at the packet modifier device, packets sent from one of the end system and the remote system to the other according to the address mapping(Col. 4, lines 35-48, combination of address database and translation table is address mapping table, Fig. 3, application table 68, application database 64,. Col. 5, lines 1-10', Col. 4, lines 14-17., Col. 4, lines 35-59, translation engine is packet modifier).

Rao does not explicitly disclose allocating different pools of addresses to a plurality of address mapping tables distributed in the communication network, the pools of addresses including at least one of voice, data and multimedia pools; and wherein the

network application server performs the step of accessing one of the plurality of mapping tables to obtain address mapping data, wherein the one of the plurality of mapping tables is selected according to a pool of addresses associated with the communication session. Bruck teaches a plurality of network applications servers configured to receive requests from the end system (Col. 7 lines 11-37 and Col. 8 lines 1-33), each of the network applications servers including a different pool of addresses associated with different types of data streams stored in an address mapping table (Col. 8 lines 1-33 and Col. 18 line 63 - Col. 19 line 23), wherein the different types include at least one of voice, data and multimedia streams (Col. 1 lines 20-43). They are further configured to generate at least one address mapping in response to incoming and outgoing data traffic (Col. 28 line 66 - Col. 29 line 47). This allows for a reliable and scalable network connection (Col. 2 line 66 - Col. 3 line 10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by Rao and modify it as indicated by Bruck such that the method further comprises allocating different pools of addresses to a plurality of address mapping tables distributed in the communication network, the pools of addresses including at least one of voice, data and multimedia pools; and wherein the network application server performs the step of accessing one of the plurality of mapping tables to obtain address mapping data, wherein the one of the plurality of mapping tables is selected according to a pool of addresses associated with the communication session. One would be motivated to have this, as it is desirable to provide a reliable and scalable network connection (In Bruck: Col. 2 lines 31-35 and Col. 2 line 66 - Col. 3 line 10).

21. With respect to Claim 11, Rao in view of Bruck teaches all the limitations of Claim 10, wherein modifying packets includes modifying packets by substituting addresses of the packets corresponding to the end system (In Rao Col. 3, lines 26-28).

22. With respect to Claim 12, Rao in view of Bruck teaches all the limitations of Claim 10, wherein the network application server is one of a plurality of network application servers (In Bruck Col. 7 lines 11-37 and Col. 8 lines 1-33), each of the plurality of network application servers serving separate address pools associated with different types of data streams (In Bruck Col. 8 lines 1-33 and Col. 18 line 63 - Col. 19 line 23).

23. With respect to Claim 13, Rao in view of Bruck teaches all the limitations of Claim 10, further comprising using the network application server to communicate the address mapping to the packet modifier device via a command protocol (Col. 3 lines 45-48).

24. With respect to Claim 14, Rao teaches a method of generating address mappings using a distributed address translation mechanism including a network application server and a separate packet modifier device, the method comprising:

receiving at the network application server, a request to establish a communication session between an end system connected to the network and a remote system connected to a public network (Col. 3, lines 20-30 and 39-45, separate network is a public network);

the network application server accessing an address mapping table to obtain address mapping information relating to at least one of the end system and the remote system (Col. 4, lines 35-48, combination of address database and translation table is address mapping table, Fig. 3, application table 68, application database 64,. Col. 5, lines 1-10', Col. 4, lines 14-17., Col. 4, lines 35-59, translation engine is packet modifier);

generating an address mapping association based on the address mapping information (Col. 4, lines 35-48, combination of address database and translation table is address mapping table, Fig. 3, application table 68, application database 64,. Col. 5, lines 1-10', Col. 4, lines 14-17., Col. 4, lines 35-59, translation engine is packet modifier); and

pushing the mapping association to the separate packet modifier device for modifying packets sent from one of the end system and the remote system to the other (Col. 4, lines 35-48, combination of address database and translation table is address mapping table, Fig. 3, application table 68, application database 64,. Col. 5, lines 1-10', Col. 4, lines 14-17., Col. 4, lines 35-59, translation engine is packet modifier).

Rao does not explicitly disclose a plurality of network application servers, wherein each of the plurality of network application servers serve separate address pools associated with different types of data streams, the different types including at least one of voice, data and multimedia streams; one of the network application servers accessing an address mapping table, the one of the network application servers selected responsive to a type of the communication session. Bruck teaches a plurality of network applications servers configured to receive requests from the end system (Col. 7 lines 11-37 and Col. 8 lines 1-33), each of the network applications servers including a different pool of addresses associated with different types of data streams stored in an address mapping table (Col. 8 lines 1-33 and Col. 18 line 63 - Col. 19 line 23), wherein the different types include at least one of voice, data and multimedia streams (Col. 1 lines 20-43). They are further configured to generate at least one address mapping in response to incoming and outgoing data traffic (Col. 28 line 66 - Col. 29 line 47). This allows for a reliable and scalable network connection (Col. 2 line 66 - Col. 3 line 10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by Rao and modify it as indicated by Bruck such that the method further comprises a plurality of network application servers, wherein each of the plurality of network application servers serve separate address pools associated with different types of data streams, the different types including at least one of voice, data and multimedia streams; one of the network application servers accessing an address mapping table, the one of the network application servers selected responsive to a type of the communication session. One would be motivated to have this, as it is desirable to provide a reliable and scalable network connection (In Bruck: Col. 2 lines 31-35 and Col. 2 line 66 - Col. 3 line 10).

25. With respect to Claim 15, Rao in view of Bruck teaches all the limitations of Claim 14, wherein the address mapping association relates to at least the end system (In Rao Col. 4, lines 35-59, relates to end system or remote system).

26. With respect to Claim 16, Rao in view of Bruck teaches all the limitations of Claim 14, wherein pushing the mapping association is done using a command language (In Rao Col. 4, lines 35-48,' Col. 4, lines 24-30).

27. With respect to Claim 18, Rao in view of Bruck teaches all the limitations of Claim 17, wherein the packet modifier device is configured to receive communication packets via the separate network from the remote system, process them using the address mapping from the plurality of network application servers and pass the processed packets to the end system (In Rao Col. 4, lines 14-17; Col. 4, lines 35-59).

28. With respect to Claim 19, Rao in view of Bruck teaches all the limitations of Claim 18, wherein the packet modifier device (In Rao Col. 4, lines 35-59) is configured to process

the communication packets by performing a destination address substitution according to the address mapping from the plurality of network application servers (In Rao Col. 3, lines 26-28).

29. With respect to Claim 20, Rao in view of Bruck teaches all the limitations of Claim 17, wherein each network application server is configured to provide the at least one address mapping to the packet modifier device via a command according to a predetermined protocol (In Rao Col. 4, lines 44-46).

30. With respect to Claim 22, Rao in view of Bruck teaches all the limitations of Claim 17, wherein each network application server is further configured to send a message to the remote system providing an address on the separate network which will be mapped by the packet modifier device (In Rao Col. 5, lines 33-43, management system updates router with address, message with address is sent in the payload).

31. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rao in view Bruck and "The COPS (Common Open Policy Service) Protocol", The Internet Society, January 2001, by Durham, et al. (Durham).

32. With respect to Claim 21, Rao in view of Bruck teaches the network of claim 20. Rao teaches that a protocol is used in address translation in Col. 4, lines 44-46.

Rao in view of Bruck does not teach that the protocol is specifically COPS-PR. However, Durham et al teach that COPS-PR protocol is used on one side of a network near a network boundary such as the one taught in Rao (page 36, paragraph 4).

It would have been obvious to one of ordinary skill in the art to employ the COPS protocol taught by Durham et al in the network as taught by Rao because employing COPS-PR provides a secure protocol near network boundaries (page 36, paragraph 4).'

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lazaro whose telephone number is 571-272-3986. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on 571-272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Lazaro
October 25, 2005

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SUPERVISORY PATENT EXAMINER